

CAUSES
AND TREATMENT
OF
STERILITY
IN BOTH SEXES
&
RECONDATION
BY
**ARTIFICIAL
METHODS**

Translated from the FRENCH of
With Notes by —x— M. J. Gerard, M.D.
DR. EVERETT WARREN with 200 Illustrations
—Boston—MASS—U.S.A.— Designed by J. E. May
FOR PRIVATE use only by
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CAUSES
AND TREATMENT
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STERILITY
— IN BOTH SEXES —
&
FECUNDATION
ARTIFICIAL
METHODS

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 With Notes by — X — III^e J. GERARD, Paris
 DRAS. EVERETT WARREN, M.D. with 200 Illustrations
 — BOSTON - MASS - U.S.A. — designed by JOSE ROY
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 THE PROFESSION.



PERHAPS • IT
MAY • TURN • OUT

A • TEXT,

PERHAPS • TURN • OUT



A • SERMON.



WHATEVER • IT • TURNS • OUT • TO • BE,
IT • HAS • BEEN • ENTERED,
AS • YOU • MAY • SEE,

AT • WASHINGTON,

EIGHTEEN • NINETY • A.D.

By • C. • E. • WARREN,
A.B., • M.D.,



His Seal.

ACCORDING • TO
ACT • OF
CONGRESS.

BOSTON, MASS.:
The International Medical Exchange,
Publishers.



LIGHT UPON
A
DARK~~~~~
~~~~~SUBJECT.

---

THIS unique work, reproduced in  
miniature from the French,  
nominally relates to Sterility,  
but incidentally introduces, in an  
amusing colloquial manner, many  
facts relating to the Hygiene of the  
Sexual Organs and the Relations of  
the Sexes.

Dr. C. E. Warren, the translator, has ingeniously retained the style and character of the original, and has retouched the numerous cuts, so that none of the artistic finish of the original has been lost, but rather increased.

The physician may peruse this curious book with profit to his fund of knowledge; and even if he is not interested in the special subject treated therein, he may gain points for use in general practice.







## TABLE OF CONTENTS.

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TRANSLATOR'S PREFACE.

PREAMBLE.

### PART I.

LATENT STERILITY.

|                                                                                          |    |
|------------------------------------------------------------------------------------------|----|
| I. — GENERAL LAWS OF<br>FECUNDATION . . . . .                                            | I  |
| II. — RÖLE OF THE OVULE,                                                                 | 10 |
| III. — RÖLE OF THE SPER-<br>MATOZOID . . . . .                                           | 14 |
| IV. — INTRODUCTION OF<br>THE TWO CELLS TO EACH<br>OTHER (MALE AND FE-<br>MALE) . . . . . | 21 |
| V. — MARRIAGE OF THE<br>CELLS . . . . .                                                  | 29 |

(iii)

|                                              |    |
|----------------------------------------------|----|
| VI.—THE OVULE BEFORE<br>FECUNDATION . . . .  | 35 |
| VII.—THE OVULE AFTER<br>FECUNDATION . . . .  | 42 |
| VIII.—CONCERNING THE<br>SPERMATIZOID . . . . | 46 |
| IX.—RELATING TO SE-<br>CRETIONS . . . . .    | 53 |
| X.—DIATHESES . . . .                         | 62 |

## PART II.

IN PRESS.

|                                            |  |
|--------------------------------------------|--|
| I.—DIVISION OF THE<br>SUBJECT . . . . .    |  |
| II.—NORMAL SECRETIONS,                     |  |
| III.—RÔLE OF THE SE-<br>CRETIONS . . . . . |  |
| IV.—ABNORMAL SECRE-<br>TIONS . . . . .     |  |

- V.—THE “WHITES” . . .
- VI.—QUALITY OF THE  
“WHITES” . . . . .
- VII.—UTERINE CATARRH,
- VIII.—VAGINAL CATARRH,
- IX.—SECRETIONS OF MAN,
- X.—ORIGIN AND COURSE  
OF THE SEMEN . . . . .
- XI.—CHARACTER OF THE  
SEMEN . . . . .
- XII.—QUALITY OF THE  
SEMEN . . . . .
- XIII.—THE SPERMATO-  
ZOID: ITS FRIENDS AND  
FOES . . . . .
- XIV.—WHAT IS THE SPER-  
MATOZOID? AN ANIMAL  
OR A CELL? . . . . .

## PART III.

MECHANICAL STERILITY .

I. — DIVISION OF THE  
SUBJECT . . . . .

II. — METRITIS . . . . .

III. — CAUSES OF METRITIS,

IV. — THE UPRIGHT PO-  
SITION . . . . .

V. — MENSTRUATION . . .

VI. — CONJUGAL REGIME .

VII. — METRITIS OF THE  
HONEYMOON . . . . .

VIII. — ABORTION . . . .

IX. — UTERINE DEVI-  
ATIONS . . . . .

X. — MECHANICAL OBSTA-  
CLES . . . . .

XI. — MECHANICAL STER-  
ILITY IN MAN . . . . .

(vi)

- XII.—ORCHITIS . . . . .  
XIII.—OTHER ACCIDENTS  
WHICH RENDER MAN  
STERILE . . . . .

PART IV.

- I.—TEMPERAMENTS . . .  
II.—INFLUENCE OF RACE,  
III.—LIMITS OF AGE . . .  
IV.—CONTRASTS . . . . .  
V.—LAWS OF REPRODUC-  
TION . . . . .  
VI.—ALIMENTARY RE-  
GIME . . . . .  
VII.—OBESITY . . . . .  
VIII.—LEANNESS . . . . .  
IX.—STATURE . . . . .  
X.—SOLITARY VICES . . .  
XI.—SODOMY AND SAP-  
PHISM . . . . .

## PART V.

- I.—GENERAL HEALTH .
- II.—IRREGULAR MENSTRU-  
ATION . . . . .
- III.—AMENORRHŒA . .
- IV.—THE “WHITES” .
- V.—ULCERATIONS AND  
THICKENING OF THE  
UTERINE NECK . . .
- VI.—METRITIS . . . .
- VII.—ATRESIA OF THE  
NECK . . . . .
- VIII.—UTERINE DEVI-  
ATIONS . . . . .
- IX.—SALPINGITIS AND  
OBLITERATION OF THE  
CANAL OF THE FALLO-  
PIAN TUBE . . . . .
- X.—PELVIC NEURALGIA .

(viii)

- XI. — COLDNESS AND AP-  
 ATHY . . . . .  
 XII. — INTERCOURSE WITH-  
 OUT PASSION . . . . .  
 XIII. — ABSENCE OR RAR-  
 ITY OF SPERMATOZOIDS .

## PART VI.

- ARTIFICIAL IMPREGNATION,  
 I. — WORDS IN SELF-  
 DEFENCE . . . . .  
 II. — WHAT IS ARTIFICIAL  
 FECUNDATION? . . . .  
 III. — PROFESSIONAL DIG-  
 NITY . . . . .  
 IV. — LEGITIMACY OF THE  
 METHOD . . . . .  
 V. — OF MATERNAL DE-  
 SIRE . . . . .

|                          |      |     |
|--------------------------|------|-----|
| VI. — MORALE             | OF   | THE |
| METHOD . . . . .         |      |     |
| VII. — HISTORY           | OF   | THE |
| METHOD . . . . .         |      |     |
| VIII. — WHEN             | IS   | THE |
| METHOD JUSTIFIABLE? .    |      |     |
| IX. — ADVANTAGES         | OF   | THE |
| METHOD . . . . .         |      |     |
| X. — CONTRA-INDICATIONS, |      |     |
| XI. — INSTRUMENTS . . .  |      |     |
| XII. — CHALLENGE . . .   |      |     |
| XIII. — OPERATIVE        | PRO- |     |
| CEDURES . . . . .        |      |     |
| XIV. — ARTIFICIAL FECUN- |      |     |
| DATION WITHOUT           | THE  |     |
| INTERVENTION             | OF   | THE |
| PHYSICIAN . . . . .      |      |     |
| XV. — FUTURE             | OF   | THE |
| INFANT . . . . .         |      |     |
| XVI. — STATISTICS . . .  |      |     |

XVII. — VOICES OF THE  
FUTURE . . . . .  
XVIII. — CONCLUSIONS .





## Part I.

### LATENT STERILITY.

OF patent causes of sterility, such as absence of the testicles, or presence of a rudimentary uterus, it is not necessary to speak at present. Let us first consider latent sterility, that which is concealed, which does not show itself by signs visible to our ordinary perceptions, and is not discovered by histological examination of the secretions, or by any other diagnostic signs, however delicate their character.

Often a mere accident of time  
and place, the selection of an  
inopportune moment, or an un-  
favorable or uncongenial subject.







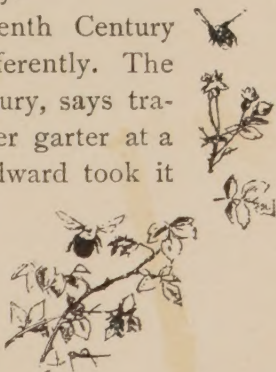




HONI SOIT QUI MAL  
Y PENSE.

**A**T a ball recently, after a sprightly waltz, a garter of blue and gold was seen lying conspicuously in the centre of the floor. No one moved to remove it, but carelessly essayed to be blind to its presence, and the maid finally removed this offensive article with a dust-pan and brush. So much for the Nineteenth Century.

In the Fourteenth Century they did things differently. The Countess of Salisbury, says tradition, dropped her garter at a ball, and King Edward took it



up and returned it to her, exclaiming, for the benefit of those who smiled at the act, "*Honi soit qui mal y pense.*" "Evil to him who evil thinks."

A spade is a spade whether we call it by its name or an "agricultural implement." By the latter term it means the same, but in the ambiguity of the false modesty, which thus indirectly alludes to and evades a question, the meaning is often totally obscured in the foggy confusion of non-intelligibility, or the clew hopelessly lost in the web of metonymy.

Every tub, says the homely proverb, must stand on its own bottom, and every subject, to be

clearly explained, must stand on bottom facts, and be clothed in plain words. If you handle pitch you will be defiled; and, contrawise, cats in gloves catch no mice. Pitch is a useful article in art, trade, and medicine; it is only relatively unclean to those too good to handle it, and it leaves no indelible stain; if you handle it you will know its qualities; but if you stand off and poke it with a ten-foot pole, you can't tell whether it is pitch or putty.

Society, standing on its pedal extremities and elevated on the stilts of prudery, occasionally pokes with its ten-foot pole of false modesty at a very delicate

subject, and when the creature stirs society retreats, and hides its blushes behind the screen of indifference and assumed unconsciousness of the existence of such an animal; whence it occasionally peeks, when it thinks no one is looking, to satisfy its very apparent prurient curiosity.

The subject of the sexual organs and functions is as closely concealed and wrapped in mysticism and darkness as the omnipresent skeleton in the closet; and yet, as every household has its skeleton in the closet, so has every person sexual organs, about which he or she should know, — what they are and how to control them. To keep them

in a private closet, the key of which is lost or unfound, is to have an unknown and unseen tenant who is constantly creating a scare, and often of the most innocent character.

Ignorance of nature's laws often lead to dangerous perversions of her functions, disregard of her warnings, or negligence of her precautions to avoid disease or prevent its advance.

There is nothing in the human economy of which men and women are more in ignorance, and of which they should know the most. Ignorance is not bliss in this case; it is the source of mental unhappiness, bodily suf-

fering, disease, crime, war, sin, and sorrow, without measure or end.

The ancients attributed much of the illness of women to hysteria, — the term being derived from the word meaning the womb; this organ, in their estimation, being the very centre of woman's existence. In this they were, perhaps, not sufficiently discriminating, and took too wide a view; yet the influence, directly and indirectly, of the sexual functions and sensual animus, to coin an expressive term, cannot be too thoroughly recognized.

Sexual starvation on the one

hand and sexual intemperance on the other number their victims by the thousands, while the exigencies of civilization and society, false methods of living, harmful customs and costumes add their quota to the sacrifice of health.

Ignorance of cause and effect is too often to blame for these moral and corporeal sins. There is so much good advice in Dr. Gerard's lately published book, relating to such subjects, that I have translated it for that reason more than for its main title.

The physician can peruse the book with profit to his general fund of knowledge, and can gain points of use in general practice.

The pithiness and apt illustrations, by word and by picture, speak for themselves.

In translating, certain difficulties have been encountered, and some ingenuity was necessary to make use of the same initials as in the original. By a happy accident it was possible to reproduce the title-page essentially unchanged, after slight alterations and retouching.

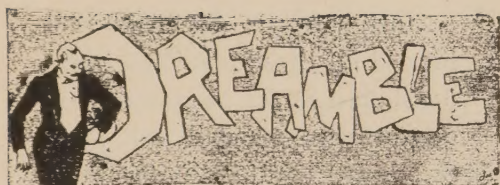
51 Union Park,

*Charles Everett Dawson, M.D.*

Boston, Mass.







**W**E especially disclaim any pretence to a treatise on Embryology. Our purpose above all is to base our exposition on practical grounds; to be clear, simple, and precise in our discussion of the causes of sterility.

We continue, as heretofore, the use of the colloquial style, maintaining the reputation already obtained; putting science within the mental reach of all, by the use of plain words and metaphors.

Our book is especially intended for those families in utter desolation as far as children are concerned; we shall tell them the cause of their barrenness, which is often simple in nature; we shall constantly refer to the numerous designs, necessary for demonstration, and so suggestive as an aid to the text of so delicate a subject.

Perhaps the suggestiveness of these fantastic designs may be censurable, but they were made with the purpose of clearly illustrating and impressing facts cited in the text; more than this, allegorical and diagrammatic figures shock the feelings much less than the brutal reality of purely

scientific and anatomically correct plates.

This is our only excuse.

All the statements in the book are scientifically correct, and all that we advance herein is but a synthesis of numerous facts gleaned from other works; among the most noted of these, suffice it to mention such authorities as Pouchet, Coste, Balbiani, Rouget, Charles Robin, Mathias Duval, Sappey, Gerbe, Rossi, Spallanzani, Volff, DeGraaf, Remak, Von Baër, Kolliker, Muller, Henle, Purkinge, Fol, Hertwig, and Raciborski, who have illustrated the science in such a manner that, to-day, the mysterious beginnings of life are

as well known to us as the phases of the egg in its development into the chicken.

These savants have had the patience to investigate the genesis of the male and female elements; from the time of their formation to the time of their fusion, they have watched every stage of embryonic life,

not only in the lower animals, but throughout the whole scale of the



warm blooded animals, up to, and including, woman. History, then, is what we are about to write, not a novel.

J. GERARD.



Part I.  
**LATENT STERILITY.**

---

I.

**General Laws of Fe-  
cundation.**

LOVE, in the marital relations,  
is an element greatly appreciated  
by those of good taste, but is not  
indispensable for the creation of

(1)

children. Simple intercourse suf-



fices to accomplish this, whether the act be all on one side, and to the other a "bore," or a duty, a clause of a contract entered into by two conjoint partners.

From the purely medical standpoint an infant is simply the final result of the marriage of the cells.

Each sex furnishes its counterpart cell, and never furnishes two, except in the case of twins. For the sake



of clearness these exceptional cases are omitted and the matter treated in its simplest and most common form.

The cell furnished by woman is an ovule, or egg, of very brief life if it is not fecundated. This small egg remains almost passive having no means of locomotion of its own, its passage from one spot to another, being brought about by external factors. The fingers of the Fallopian tube guide the ovule to the orifice of the canal and when it is engaged therein the ovule progresses farther only by the vibration of the cilia which line the tube. These cilia vibrate from without inwards, so that

the egg being once within the canal it must perforce pass through it and into the uterine cavity. It can never retrace the way. It may, however, be  arrested in transit, or it may find the calibre of the tube too small to allow it to pass; then tubular pregnancy follows.

On the other hand, man furnishes his special cell, not an ovule, but its equivalent, a spermatozoid; and although nature furnishes an innumerable quantity of these cells, she chooses but one, making a judicious selection of the best, the one having the greatest vigor and health



being the  
one of all  
fitted for  
the pur-  
pose of  
perpetu-  
ating the  
species in

the best conditions. Out of twelve hundred thousand she has one, the elect *par excellence*. Horticulturists, as every one knows, choose the best plants for seed if they would have good products. Stock-raisers do the same. They select the strongest and most healthful animals, and the result is good and fair to look upon. No doubt troubles their mind as

it would if they should sow poor seed, to rot in the soil, or should serve old, infirm, and sickly animals, who could produce only poor offspring or none at all.



Nature  
with wis-  
dom de-  
fies our  
wilful-  
ness, for  
while we  
o f t e n

make marriages of convenience,  
or for the dowry, she offsets our  
egoism, in a measure, by select-  
ing that which is best in us, a  
selection of the fittest. She in-  
stitutes a steeple-chase as it  
were, the most vigorous and en-

ergetic spermatozoid alone, being crowned as happy victor, and rewarded with the privilege of entering the ovule and endowing it with life.

This is a novel race-course, this one of nature. The ovule has no power of movement in itself, it is simply carried along to its destination by the vibratory movement of the cilia; but the spermatozoid under the microscope, shows that it is a very energetic little thing, flashing through space in an instant, propelled by its tail, which is endowed with great vigor; it doubles and advances like a fish in the water, and, like the fish, it progresses more easily with the

current than against it. But it meets obstacles which we represent diagrammatically.

The sketch represents an inclined plane showing the difficulty to be overcome by the spermatozoids which have to ride against the current of the cilia. Even near the starting-point some faint-hearted ones have lost interest in the struggle and die in their tracks. Further on several are whipping up their courage and exerting themselves as if they were climbing the greased pole for the soap at its top, while the most vigorous are nearing the finish. One alone arrives at the spot, enters the egg, and thus closes it to all oth-

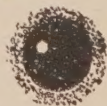
ers, just as the female of all animals refuses the approaches of the male after fecundation.



## II.

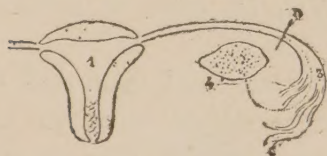
### Role of the Ovule.

EACH month, at the menstrual period, woman lays a little egg, the ovule, which is detached from the ovary. This ovule, scarcely as big as the head of a pin, is contained in a pellucid membrane very easily altered in character, either by disintegration or by thickening. In either case, whether the casing is broken or thickened, the egg of course becomes sterile. The egg contains in its midst a small white spot, — the germinative spot, — called by embryologists the fe-



male pronucleus. . This spot occurs in every ovule whether the woman is married or single.

If this egg is not fertilized at its exit from the ovary, the chances are that it never will be,



and if it passes out of the Fallopian tube without meeting a spermatozoid the chance becomes a certainty. Such a little cell, all alone by itself, with nothing to live on, undergoes rapid alteration.

The figure will show the short space of time propitious to the

act. The curved dotted line is precisely the course in which the egg can be fertilized. As soon as it passes the line of the external third, the egg ceases to be a good one, and is rejected or liquified, no trace of it being left.

How essential, then, that intercourse should be at the opportune moment, when we consider in what a brief time this frail existence ends, for of all the ephemerids, the human ovule, if not impregnated, is the shortest lived. The higher the animal in the scale, the less vitality in the ovule, the smaller its size, and the more delicate its existence.

The ovule of the frog is 14-15

times as large as that of a woman,  
and its vital resistance is proportionately great; its life, after its exit from the ovary, is in favor of the frog as 1 : 100.



### III.

## The Spermatozoid.



NOTHING makes so deep an impression upon the mind as a figure of speech. If we sow peas we do not expect beans.

This is the case in the human seed-sowing. The infant is always compounded of the same elements as the seed, but one of the sowers may exercise greater influence over the product, — sometimes in physical strength, sometimes in mental power, — so that a boy may have the fig-

ure of his father and the virtues or failings of his mother, while the daughter may inherit the moral character of her father and physically resemble her mother. The spermatozoid is an exact miniature of the one who supplies it at the moment of its emission. This moment, then, plays no unimportant part in the future of the infant. The father should choose the right time for intercourse. He should not be overfatigued, nor excited at that supreme moment, if he would not create his image at that moment. In another chapter we shall speak of those special conditions which the husband ought to observe that he may create a child

having the maximum qualities of father and mother.



The husband is the responsible party in the vitality of the child. If the woman takes a whole month to elaborate and perfect the ovule and to bring it to maturity, why should not the husband take a similar length of time to perfect the seed? An anatomical description of the genesis of the spermatozoid is unnecessary at this place. It is sufficient to

(16)

know that the gland which secretes it is an organ precisely similar to the ovary of woman, where it passes through a like elaboration as the ovule, the development of the spermatozoid resulting from the successive changes in a special cell, which finally becomes an animalcule, as it were, endowed with vigor and resistance, as great as the genital rest has been complete.

We said elsewhere that horticulturists never took green apple-seed when they wished for fine apple-trees, and the analogy holds in man.

The most indifferent man, in the smallest acts of his life,

takes every precaution, and se-



cures every possible guarantee that he may not do a useless or incomplete thing, even if it is no

more important than adding up his laundry-list; but when he attempts to perpetuate the

species, to make another like himself, he throws prudence to the winds and goes to the devil, to make a man as he would light a cigar.

Man is a creature of habit, and yet when a habit is once formed, he pretends, and even feels that it is necessity that impels him to satisfy a natural appetite or desire.

He travels in a fatal circle, which leads to the tomb by the shortest cut, contracting phthisis and similar wasting diseases, which successfully attack only those constitutionally weakened and exhausted, and if, per-



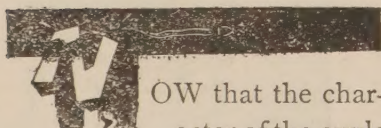
chance, this man perpetuates himself, in such a sad condition, he transmits to his progeny a fatal blemish which disappears only with the race.

If a man wants children, let him abstain as much as possible; let him not sow his seed with the wind, but let him economize and save his vigor for his great duty. If, on the other hand, he sacrifices to Venus, that is his own lookout; he wrongs no one as much as himself, and every one is at liberty to shorten his life, if he so desires; at least we cannot prevent his so doing.



#### IV.

### The Meeting of the Cells, Male and Female.



OW that the character of the ovule and the spermatozoid is understood, let us see what happens at the meeting of the cells. What is the mystery of incarnation which gives birth to the child? Three cases occur.

1st. Intercourse, with its attendant emotion, causes the rupture of the ovisac which holds

the ovule within the ovary. It  
“shells it out.”

2d. The ovule is already free,



but the husband is still absent.

3d. The husband fulfils his  
duties, but the egg is still in its  
envelope.

The question arises, what will  
happen in each case?

First supposition. This most frequently occurs: Excited by the voluptuous embrace, the ovule comes from the ovary, like a chestnut from its burr, and is seized by the fringes of the tube, which, by movements of prehension, lead it towards the canal, to meet the spermatozoid,



which has not yet arrived, since it takes two hours to traverse the

course of 16-17 centimetres from the neck of the uterus to the external portion of the tube. Now the deed is done.

Second supposition. The ovule is already free when the husband is absent. Nature does not hurry matters now. The fingers of the tube move more slowly, the ovule travels softly, and, as it were, with regret. It waits a day or two for that which shall revive its drooping spirit, and give it life. But often it waits in vain, and perishes in its "tracks," disappearing from the scene leaving no trace of its existence. If, on the contrary, it feels the arrival of its master, it is reanimated, it takes hope

again, and hastens to the meeting, but, alas! sometimes it is too late, its envelope has been worn out in the waiting, and its contents lost. Adieu to life and its smiling dreams.

Third supposition. The husband fulfils his duty, but the



ovule remains in its envelope.  
The spermatozoids have finished

their course and have gone as far as the ovary, to find out what the trouble is. Here they remain, caught in the folds of the tube. Some of them have fallen by the way, but the most vigorous have arrived, and now rest to recover from their fatigue. Here they are in a life-giving medium, warm and sheltered from death, provided the liquid in which they find themselves is propitious; but, on the other hand, they may die and disappear.

Why they die we shall see later, but to tell the reason now would be to anticipate.

It is an incontestible fact that the spermatozoid can live in the deep genital regions of the

woman, as well as in the seminal vesicles of the man. Yet there are limits to this longevity. It would not be wise to endow them with too long life, for then abuse would follow. Kids are known to be in rut in July, and to be fecundated four months after, but this is a freak of nature. The ovule has slept for four months before beginning to develop.

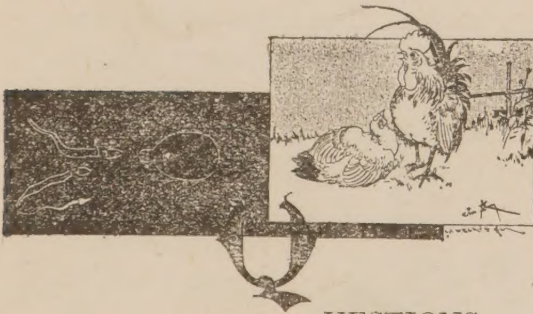
To infer that a woman, who has seen her husband the day of his departure, could bear a child to him a year after, would be too accommodating to the intervening — circumstances. No! the spermatozoid may rest two or three days in the genital

passages of the woman, and  
fertilize the egg on its way out,  
but this is all the extension of  
time that we can reasonably  
grant.



V.

Marriage of the Cells.



QUESTIONS

of introduction being settled, and the two cells being in presence of each other, let us discuss their union and fusion into one element, destined to perpetuate each by normal developments.

The two elements are true coquettes. The male is like a

bantam rooster skipping about the pullets. He makes the tour of the ovule, bowing and balancing. The ovule, on its side, throws out little conical projections toward the spermatozoid, as if beckoning and inviting it to enter. Still, although the



envelope is exceedingly thin, it seems too thick to be pierced by the beak of the spermatozoid, but this prolongation of the ovule tends to thin out the envelope, just as one reduces the thickness of a toy balloon by

pressing it with the finger, and then finds it easier to puncture it with a needle. At last the spermatozoid finds the weak spot and enters. At this instant the



little conical  
prolonga-  
tion disap-  
pears, catch-  
ing the sper-

matozoid by the head, and cutting off the tail, leaving it "out of doors."

In spite of this decapitation the victory is won. The tail disappears, as it is now useless, the spermatozoid being in no further need of locomotor organs, since it has reached its final destination.

We have said that in the centre of the ovule there was a small white spot, the pronucleus. As soon as the head has entered the ovule, and has lost its tail, a sort of nimbus or glory is seen radiating from it,— a star, as it were,



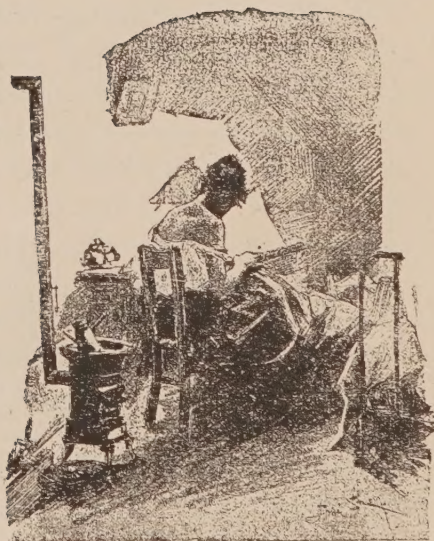
lighting up the dark portion of the ovule like true rays of light. It is like a ray of the sun, coming to vivify that which heretofore was only inert matter.

This luminous star, the male pronucleus, is separated from the female nucleus, which is at the centre of the ovule, by the length

of the radius, it being at the pole.

The female does not stir, but the male approaches her and soon is in contact. The female has meanwhile become shrunk away into a curved form, receiving the male. This depression increases, and the two elements, a moment ago separate and distinct, fuse into one. Soon the radiation from the pronucleus extends throughout the whole egg, and forms the first lineaments of the new being, — its life is lined out as in a sketch.





POVERTY. — Potent Power Promoting  
Prostitution and Prevention.

## VI.

### The Ovule before Fecundation.



ON account of its small size—the ovule measures only the tenth of a

millimetre — it is easily affected by and subject to many accidents. The genital passions are such, that it is as if a storm swept through the organs, and nature takes every precaution to prevent the destruction of the ovule by this cyclone of nervous erethrism.

The development of each ovule requires twenty-eight days whether the woman is married or not, but this general rule has many exceptions.

The plum-tree which ripens its fruit in August, may be stripped in July by the wind, or by some little fool who



shakes its branches. The fruit is gone, but the tree is not to blame. What could it do? The branches wither and it produces nothing; it lives, but is barren.

The analogy needs no elabo-

ration. Here is another figure. The ovule requires twenty-eight days to mature, but if its expulsion is hastened, by intermenstrual excitants and stimulants, it is like unripe fruit, green, without bouquet or vigor — cheap at any price. Irregular menstruation is the result, and, secondarily, sterility supervenes.



The pullet who lays eggs before her time does not lay them long, and does lay them clear without a yolk.

Inter course, therefore, before the maturity of the ovule is not only barren of

results, but leads to the premature ripening of the ovule which then falls, useless, into the uterus when the husband is not present.

Ardent embraces often break the envelope of the ovule and it is scattered throughout the canal where it ought to be fertilized. It is, like the hen's egg, soft-shelled; it is so delicate, so fragile, that it breaks in the laying. We give

the hens lime, and this indicates the remedy for woman — Phosphate of lime.

On the other hand, the envelope may be too thick and



the husband's forces too weak to penetrate it, for the spermatozoid is the exact image of the man who produces it, and the fault often lies with him. His vigor is below par or has been squandered, or perhaps his only money is good wishes. Woman must then reduce the system by alkaline treatment, and by diet, then, perhaps, the door will open to the timid and gentle knock.

These different causes of sterility might be called micro-organic on account of the microscopic character of the elements entering into them, but they are not the only ones that escape ordinary examination. Unconscious antipathies, natural repul-

sion of the elements, varying electrical tension, and magnetic incompatibilities, are beyond research.

One more cause remains — Ovo-tubular paralysis. The egg may remain within the ovary, as it were, asleep, or if it is expelled, it is changed in character. Then the fingers of the Fallopian tube may not be wide awake and they do not seize the ovule when it escapes, but let it fall into the peritoneal cavity. At other times these fingers are cramped or work imperfectly; they are useless as if stiffened by neuralgia or rheumatism. There are as many methods of treatment as there are causes.

Functional inactivity may ex-

tend into the tube itself, the cilia, which should escort the ovule to the uterus, remain motionless, and so, having no locomotor organs of its own, the egg, whether impregnated or not, perishes, being out of its element and crowded for room, while it is still in its first phases.



## VII.

### The Ovule after Fecundation.



IN the development, certain difficulties are met. The spermatozoid has penetrated the ovule and lost its tail, but the body is still entire; microscopic in size, it is true, but still more than a geometric point, which has no breadth, length, or thickness. It is a little man who has, as it were, brought despatches to

head-quarters, and has won a glorious victory over his comrades, and has received — promotion.

Rather, it is like a jockey who has won the race, but broken a leg. Can the spermatozoid thus mutilated do its duties?

Is it the exact equivalent of the cell which it has entered,



for, as in chemistry, equivalents do exist? You cannot combine oxygen and carbon, two atoms of one and one of the other; nor can you combine vital atoms, except in their predestined way.

Granted that the spermatozoid is within the ovule, will a fusion of the two pronucleii occur? Is there a sufficient affinity between the two cells for them to become one, after they have thus come from afar and have met face to face? The husband may be near the pole of life, while the wife is at the meridian; can two cells, six months the antipodes of each other, give and reciprocate love, or will the one or the other default at the last moment?

Differences of race, of physique, and of morals must all be accounted for in the grand result. Cat and dog may live in the same house, may be very

polite and civil, the one to the other, and yet they never think of attempting to perpetuate their good relations. Even should any result follow, it would be a mere hybrid. So, affinity and harmony may apparently exist in some households, when facts prove it is the cat and the dog on a larger scale.



VIII.

Concerning the Sper-  
matozoid.



ON'T imag-  
ine that the  
woman is  
the only one  
at fault in  
sterility.

Some men  
are absolutely paupers as far as  
semen is concerned. Such men,  
though, are invalids, and will be  
taken care of in their appro-  
priate place. We here wish to  
consider those who, apparently,  
have all the desirable qualities;

those, in a word, who have proved themselves competent as to visible quantity and quality, but fail in the clinical test, at the bedside of the wife.

It is one thing to be honored with the title of husband, and quite another to be a father.

Sometimes semen, apparently all right under the microscope, never brings paternity elsewhere. The woman may become divorced, and later bear children. The spermatozoid was, beyond a doubt, in the wrong.

The same difference may exist as there is in a draught-horse and a race-horse, — the one travels slowly, and stops at the first obstacle, the other goes on

the run and leaps all barriers; both move, in their way. Under the microscope we see similar characters in spermatozoids; here is one with a short, thick-set neck, fat body, thick tail, and heavy gait; there is one clean-cut, with slender form, fine head, long tail, and quick gait, leaping and prancing and always on the move. The road, too, has its difficulties, analogous to the uterine ways. Here are long stretches of level plain, where a few easy rises occur; here the horse may breathe hard and stumble, where the road becomes rougher; here the road leads over an abrupt precipice, steep mountains or through narrow

defiles; but the agile horse and the skilful rider surmount all obstacles. Such is the road in certain cases upon which man enters, and over which he sends out his couriers.

So we see that there may be a cause of sterility whose logical treatment is by divorce; but such counsel is a delicate matter, and few physicians have the moral courage to give such advice or to shoulder the responsibility of the consequence.

The age of the spermatozoid, for it has age, is an important point in the line of success. This age may be relative or absolute, — the latter being the actual age of the man. Generally this has

no influence upon the spermatozoid between the age of twenty and fifty the man, then being in all his vigor, and the spermatozoid being the exact image of the man, having all the vigor necessary to fulfil its end.

The relative age is different. On the one hand a man may be thirty and yet turning sixty. It is a matter of energy, of consti-



tution, or abuse. The spermatozoid always faithfully repro-

duces the age of its proprietor. It walks on the same legs and at the same pace.

Still another age is of importance — the microscopic age. Woman takes twenty-eight days to develop and perfect the ovule. Man has the advantage here, for he has an enormous store of spermatozoid. Woman has but one ovule at a time, while man does not need twenty-eight days to reproduce the spermatozoid that he wastes when he fires his powder at the sparrows; still it is prudent that he should abstain from intercourse, at least eight days, when he is disposed to become a father, and then, out of the supply thus economized, there

may be some new comers who will be the chosen one rather than some old devotee of Venus, — a candidate for the palm.

Here is the remedy and proof, too, of the old proverb, "There is no husband like an absent husband to beget many children." Prudence dictates that the absence be not a prolonged one, for there is another apt maxim, "It is not wise to tempt the Devil."



IX.

Concerning Secretions.



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others

which exert an appreciable influence upon fertility. We do not speak of the natural acid secretions of the vagina, or the alkaline secretions of the uterus, but of those exudations of matter which block up the Fallopian tubes and other parts, as

mucus blocks the nostrils, a dried up and agglutinated mass, which will allow nothing to pass. neither the spermatozoid the one way, nor the ovule the other.

All physicians know how difficult it is to successfully treat ozoena or catarrh, on account of poor constitution and the thickening of the nasal membranes; the ulceration which develops is not always an expression of a scrofulous or syphilitic taint; it is often simply due to the retention of mucus, in a warm place, where the three conditions of putrefaction exist together, namely: air, heat, and moisture.

The Fallopian tubes are always moist and warm, but the

third factor is lacking, in the normal state; for the uterine cavity only nominally exists. The vagina also is a cavity only in name, the walls being in close apposition, like the leaves of a book. How then does putridity occur within these organs? The dead foetus gives us the key to the remarkable power which air shows of penetrating into the deep parts and there setting up septicæmia. While the ovule is covered by its envelope, maceration, not putrefaction, takes place. As soon, however, as the continuity of the envelope is broken, even by the minutest aperture, putrefaction sets in and the surgeon is obliged to in-

tervene promptly, while in the other case, the dead foetus may be carried for years, in the womb, without any untoward symptoms or uneasiness.

This analogy shows that air may penetrate within the Fallopian tubes and thus become a factor in sterility, since metritis (inflammation of the womb) leads to thickening of the walls of the uterus thus forming a true cavity permitting the entrance of air, which may extend into the tubes, and thus set up those dull pains which sometimes occur in the abdomen, simulating peritonitis and rendering the woman sterile.

The false pains sometimes

preceding the monthly flow are due to this cause, at least we know of no other. There is always an ovarian congestion and uterine turgescence before the periods. At this moment the uterine cavity, only nominally existing up to this time, becomes patent and real. The organ then acts as a siphon sucking in the air and also acts like a rubber bulb, forcing this air further in; the thicker the walls the stronger the action. The pain, therefore, depends upon the amount of inflammation and consequent thickening and the amount of air which enters the deep genitals.

If, however, one can cure the

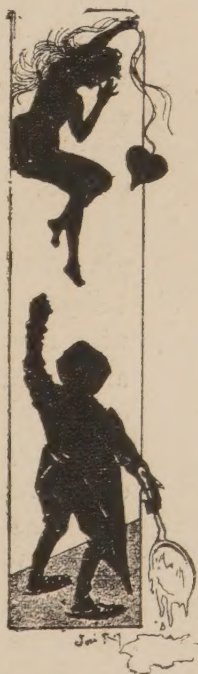
metritis the premonitory pains disappear and fecundation becomes not only possible but probable.



In addition to septicæmia, other poisons, special kinds of ferments, may attack the ovule in its different phases and kill the spermatozoid. Without mentioning these at length, we may call attention to the fact that some women, at the menstrual period, would turn a sour apple and spoil the

most piquant sauce by their presence alone. A peculiar odor, *sui generis*, emanates from them, and is perceptible to those around them. The reason of this is not easily explained; it is an idiosyncrasy.

Science, to-day, knows the composition of certain odors of the body, and finds them to be fats uniting with elemental bases, such compounds resulting, for example, as butyrate of



soda, etc. These odors are not of the same strength in all women, but vary as the bouquet of wine varies,—some agreeable and attractive; others indifferent; others disagreeable and repulsive. This is the reason why, as Dr. Galopin says: "Love begins at the nose."

Apropos of perfumes, it is wise never to disparage tastes and colors, for what displeases one may please another. There is no accounting for tastes. The embryonic cells probably have the same affinities and dislikes as their proprietor.

Certain it is that some odors which we cannot define, having no standard term of olfactory

comparison, are the cause, and the only appreciable cause, of sterility. This specific odor is so characteristic that it can be recognized among thousands. We have improvised a name for it, which, while conventional, indicates its character and origin, for as it occurs only at the menstrual period, it is proper to call it, "Rutinate of Ammonia."



## X.

### Diatheses.



ONG se-  
ries of  
obser-  
vations  
show that  
man may

have a special disposition to disease, congenital or acquired, by reason of which the tissues show a tendency to degenerate, owing to disturbances of nutrition, or lack of nutrition, leading, in their turn, to the production of a series of morbid products, which involve the constitution in the same state. Such is a diathesis.

These diatheses play an important part in producing sterility, for by poor nutrition the liquids of the economy become poisoned, and these being called upon to form the solid parts, there results a vicious combination which induces serious evils.

Strict observance of hygienic rules, special medication, and careful diet may eradicate the diathesis, or at least so modify it that conception becomes possible.

Among the principal diatheses having marked influence upon reproduction, scrofula and syphilis stand foremost and alone.

These two constitutional diseases are intimately allied; in

fact, one may be said to be the mother of the other, scrofula being the daughter of syphilis. Every syphilitic element which becomes fertile during the primary stage is destined to abort during the first four months; but if, perchance, the infant, reinforced by the greater health of the one<sup>r</sup> partner, reaches full term, it will, without exception, be syphilitic. On the other hand, if the infant is conceived during the secondary stage, the chances are that it will still be born syphilitic; but if it is not, it will at least be tainted with scrofula.

During the tertiary period, scrofula is the rule, less pro

nounced, as the syphilis has been successfully treated and as the period of inoculation is more or less remote.

Whatever the case may be, these constitutional affections are hereditary, and become less pronounced proportionally to the number of crosses and the health of each party in the cross.

The long life and tenacity of syphilis is strikingly shown by the marriage of a negro with a white, or *vice versa*. Long generations pass away before black blood or its traces disappear, and sometimes it never goes. Let syphilis represent the black blood. Then consider that one single cross between a black and

a white gives a line of progeny which is still strongly marked at the twenty-second (22d) generation. What a length of time is necessary to destroy traces of syphilis and scrofula, even provided the conjoint factors are otherwise blameless!

Scrofula and syphilis, then, are powerful factors in modifying ovulation and its phases, and also exercises a pernicious influence upon the spermatozoid, thus preventing conception in either case.

Another diathesis, as common as either of the others, is tuberculosis, and its influence upon the procreative forces is as great. Young girls especially, poorly

formed and undeveloped, are victims to this disease. As for marriage, which is sometimes prescribed as a remedy in these cases, God is witness of the pitiable results.

Sterility, unfortunately, is not the lot of those who are properly developed; they conceive only too easily, but each conception is a giant's stride toward the finale, and these unhappy women die in the second or third confinement, leaving a stunted progeny, which drags down with itself all that may cling to it. Surely the sowing here is a fatal one, and decimates the population without leaving a harvest.

It is otherwise with man. He, on the contrary, is predisposed to fecundity, the disease developing more ardent genital appetite every day, until at last he succumbs, leaving traces of his venom in his track, like the Parthian serpent.

While tuberculosis has this influence upon generation, it has no terrors not amply offset by the dowry, and consequently tuberculosis will live as long as the ages, or, rather, until the end of humanity, for it is so rapid in its advances that it threatens to kill off the human race, giving place to a new species.

Other diatheses have their influence upon sterility, so that if

syphilis, scrofula, and tuberculosis are not sufficient to prevent reproduction, by alteration of the quantity, if not the quality of the seed, then the following may aid in the result.



Such, for example, as catarrh, rheumatism, arthritis, and the uric acid, herpetic and nervous diathesis.

All these alter or modify the ovule, as well as the spermat-

zoid, or annihilate them completely.

Catarrh injures and alters the ovule, and opposes the advance

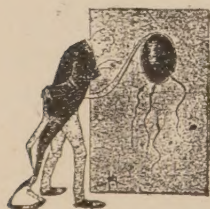
of the spermatozoid, environed, as it is in such cases, by a glutinous fluid from which it can

not escape, or only with the greatest difficulty.

Rheumatism, even latent, paralyzes the movement



of the fringes of the Fallopian tube, and the egg is thus lost.



Arthritis paralyzes the cilia, and the ovule, even if impregnated, dies in its place, there being no vi-

bration of the cilia to carry it to the uterus.

The uric acid diathesis thickens the envelope of the egg, and fills it with a sort of crystalline deposit, which prohibits the entrance of the spermatozoid.

The herpetic tendency, on the other hand, alters the membrane, polishing it, as it were, making

it over-thin, so that it breaks before fecundation can take place.

Nervousness, on the other hand, causes tempests of nervous energy, with spasmodic contractions, which too often injure



the egg by breaking it; it is, as it were, struck by lightning.



These diatheses just enumerated, act upon man the same as upon woman, and his seed is

tainted with every character of disease from which he is suffering.

What a result if both are afflicted with the same diatheses, or different ones, — the adding to the other and multiplying the faults of each. Thus, forewarned the physician is forearmed. Let him be vigilant and not despair, for diet and rational hygiene may do much.





# SAMPLE PAGES

FROM FOLLOWING PARTS.

## LEUCORRHOEA.

(The Whites.)



ONE of the mucous membranes are without secretions of a lubricating character thus allowing contiguous, or opposing surfaces, to glide over each other smoothly and without friction. The uterus is no exception to the rule. It is also an extremely sensitive organ which easily catches cold. We use the phrase intentionally, since it perfectly expresses the idea and especially intimates the

## IRREGULAR MEN- STRUATION.



WOMEN, like watches, ought not to gain or lose time from period to period. Every poorly regulated watch is taken to the watchmaker for repairs, and every "irreg-

ular" woman should go to the physician, from whom she may learn something to her advantage.

✱ Some women have two periods every month, one slight, one

## SIZE.

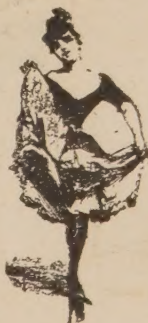


THE general proportions being considered we notice that large women are delivered with more difficulty than

small ones, due in part to a lack of energy in their make up. We might say that there was a certain sum total of vigor for each being, and as the levers were lengthened and removed from the centre of action the power manifested became less in proportion.

that they have no place for the women to sit down; they must recline; seats are furnished for men alone.

Although this vertical position favors uterine deviations and flexions, silly woman adds to the causes which produce these disorders; from morning till night she binds herself with a corset which crowds all the organs into the lower part of the abdominal cavity, increasing, by their weight and pressure, this tendency to displacement, exercising





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(1431)





